

Atty Dkt. No.: 09/466,994

USSN: 06510118US1

b2 3. (Amended) The targeted molecular bar code according to Claim 2, wherein said monomeric units comprise a moiety selected from the group consisting of a phosphate group or a phosphorothioate group.

b3 12 8. (Amended) A targeted molecular bar code comprising:
(a) a negatively charged block copolymer of from one to twenty blocks, wherein said blocks are selected from two or more different blocks, wherein each block consists of at least five monomeric units comprising a phosphate group; and
(b) a member of a specific binding pair, wherein said member of a specific binding pair is joined to said negatively charged block copolymer through a linking group.

b4 14 10. (Amended) The targeted molecular bar code according to Claim 8¹², wherein each block is a homopolymer of at least five monomeric units selected from the group consisting of phosphates and sugar phosphates.

b5 20 16. (Amended) A targeted molecular bar code comprising:
(a) a negatively charged block copolymer of from two to twenty blocks, wherein said blocks are selected from a group of three different blocks, wherein each block is a homopolymer of at least five monomeric units selected from the group consisting of polyphosphates, oligonucleotides, oligodeoxyribosephosphates; and polyethylene glycol-phosphodiester; and
(b) a member of a specific binding pair, wherein said member of a specific binding pair is joined to said negatively charged block copolymer through a linking group.

Please cancel Claims 20-24.

Please add the following new Claims 30-35.

b6 24 30. (New) A targeted molecular bar code comprising:
(a) a molecular bar code that is a block copolymer of a plurality of blocks selected from two or more different blocks, wherein each block is a homopolymer comprising at least five monomeric

4²7

B

Atty Dkt. No.: 09/466,994

USSN: 06510118US1

units, and further wherein said molecular bar code is a charged polymer capable of generating a reproducible signal upon passage through a nanopore; and

(b) a member of a specific binding pair, wherein said specific binding pair member is joined directly or through a linking group to said molecular bar code.

²⁵ 31. (New) The targeted molecular bar code of Claim ²⁴30, wherein said charged polymer is negatively charged.

²⁶ 32. (New) The targeted molecular bar code according to Claim ²⁵31, wherein said monomeric units comprise a moiety selected from the group consisting of a phosphate group or a phosphorothioate group.

²⁷ 33. (New) The targeted molecular bar code according to Claim ²⁴30 wherein said block copolymer comprises three different blocks.

²⁸ 34. (New) The targeted molecular bar code according to Claim ²⁴30, wherein said molecular bar code comprises a linking group.

²⁹ 35. (New) The targeted molecular bar code according to Claim ²⁸34, wherein said linking group is a photocleavable linking group. --

REMARKS UNDER 37 CFR § 1.111

Formal Matters

Claims 1-3, 5-19, and 25-35 are pending after entry of the amendments set forth herein.

Claims 1-3, 5-19, and 25-29 were examined and were rejected. The Applicants note that Claim 4 was canceled in their communication filed on August 10, 2001, in response to the Office Action dated April 10, 2001. Claims 20-24 are canceled in this response without prejudice and without any intent to give up the subject matter therein. New Claims 30-35 have been added in place of canceled Claims 4 and 20-24.